

REMARKS

Applicants thank the Examiner for the courtesy extended to Applicants' attorney during the interview held January 8, 2004, in the above-identified application. During the interview, Applicants' attorney explained the presently-claimed invention and why it is patentable over the applied prior art, and discussed other issues raised in the Office Action. The discussion is summarized and expanded upon below.

The rejections:

under 35 U.S.C. § 102(b) of Claims 1-3, 5, 7, 10, 13 and 20 as anticipated by U.S. 5,126,121 (Weimer et al '121) as evidenced by U.S. 5,525,320 (Pratsinis et al); and

under 35 U.S.C. § 103(a) of:

Claims 12-15 and 19 over Weimer et al '121 evidenced by Pratsinis et al, and further in view of U.S. 5,190,738 (Parent);

Claims 1 and 4 over U.S. 5,219,804 (Weimer et al '804) in view of Weimer et al '121, as evidenced by Pratsinis et al; and

Claims 17 and 18 over Weimer et al '804 in view of Weimer et al '121, as evidenced by Pratsinis et al, and further in view of Parent,

are all respectfully traversed.

As recited in above-amended Claim 1, the invention is a flame synthesized aluminum nitride filler-powder comprising elements Al, O and N, or elements Al and N, wherein the particle size of the powder is from 0.001 to 500 μm , the mean particle size thereof is from about 10 to 100 μm , the external shape of the particles is spherical with a ratio of the long-axis diameter to the short-axis diameter being about 1:1, and the powder is manufactured continuously in a gas phase in the presence of a flame by using as a raw material powder consisting of element Al, or a mixture of a powder consisting of elements Al and O and a powder consisting of element C.

As Applicants' attorney pointed out during the above-referenced interview, Applicants have invented a novel flame synthesized aluminum nitride filler powder containing the elements Al, O and N, or the elements Al and N, wherein the particles are at least substantially spherical among a wide range of mean particle sizes. The prior art has not disclosed or been able to obtain such spherical or approximately spherical particles of the size now encompassed by the above-amended claims.

Both Weimer et al '121 and Weimer et al '804 (Weimer et al patents) are drawn to rapidly heat powdered aluminum nitride. However, as admitted by the Examiner, neither Weimer et al patents, which the Examiner asserts are the closest prior art, appear to disclose or suggest the formation of spherical particles having an average particle diameter of at least 10 μm , as the final product of both Weimer et al patents is disclosed to be in the submicron range. Thus, Weimer et al '121 discloses the production of uniform crystals having a diameter of from about 0.4 to about 0.8 micrometer (column 11, lines 42-44). Weimer et al '804 refers to their product as a "submicron" product powder (column 8, line 7). Pratsinis et al does not suggest otherwise. Parent does not remedy any of the above-discussed deficiencies of the Weimer et al patents.

For all the above reasons, it is respectfully requested that the rejections over prior art be withdrawn.

The rejection of Claim 1 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that it be withdrawn.

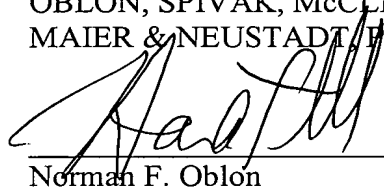
All of the presently pending and active claims in this application are now believed to be in immediate condition for allowance. The Examiner is respectfully requested to rejoin

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non-elected Claim 6, and in the absence of further grounds of rejection, pass this application to issue with all active and rejoined claims.

Respectfully submitted,

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